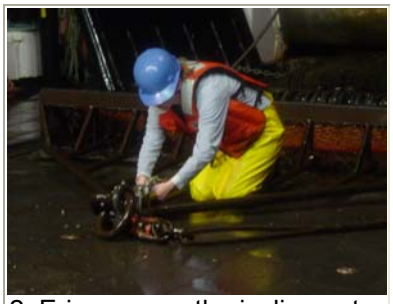
Day 3

1. Mr. Sammons poses for a picture behind a recent load. There were few scallops in this midnight catch. Some condensation on the lens made it a bit fuzzy.



2. Erin secures the inclinometer to the dredge. This allows the dredge operator to know when the dredge hits bottom and rests flat on the bottom.

3. The NOAA crew brings in the dredge filled with the catch.

4. Not only are scallops found, by other species including crabs, starfish, and fish.

5. This is part of a scallop catch. At one station, we collected 26 full baskets.

6. A sampling of the scallop baskets are then weighed and measured.

7. The information is processed by computer for analysis.

8. Some scallops are measured and weighed differently and shucked.

9. The shucked meats and gonads are measured and saved for future study.

Date: July 27, 2005
Time: 6:26 GMT 2:26 a.m. EDT

Latitude: 40° 31’ N
Longitude: 68° 49’ W
Visibility: undetermined

Wind direction: SSW
Wind speed: 16 knots
Sea wave height: 0
Swell wave height: 0
Sea water temperature: 18°C
Sea level pressure: 1012.6 millibars
Cloud cover: Clear

Question of the Day:
How do scallops use camouflage and countershading to help protect themselves from their predators? (See pictures 5 and 6.)
Is this a physical or behavioral adaptation?

Yesterday's Answer:

1. pulley 2. inclined plane 3. lever 4. pulley 5. pulley 6. inclined plane 7. lever 8, pulley 9. wheel and axle

Answers will vary on the second part of the question.

Science and Technology Log:

The purpose of this scallop survey is to study the "basic biology and distribution of " scallops and to study the "population dynamics of the species." Historically, scallop populations have increased and decreased at alarming rates. Overfishing and natural predators have lead to a significant decline of scallops in the Atlantic Ocean. Conversely, scallop populations have flourished in areas that are closed to fishing, thus allowing scallops to mature more. While this is by far the most important reason why there are fewer scallops, scallops have natural adaptations that also help them survive.

One structural adaptation is their color. Notice in the pictures above that some scallops are dark on top and lighter on the bottom. This allows the scallop to blend into the sandy bottom as seen from above and the bright surface as seen from below. A behavioral adaptation that the scallop has is to shoot water as a way to propel itself from a predator. However, these adaptations are not always strong enough to protect themselves from predators and humans.

On Wednesday, we continued to collect scallops. The shells will be used for determining the age of the scallops. In addition, the meat and gonad weights will be used to estimate shell height/meat weight relationships and annual mating cycles. Some other sea life that is coming up in the dredge are different species of flounder, hake, crabs, skate, goosefish, hermit crabs, and starfish. There are many knowledgeable people on board who have provided mini-lessons for me on fish identification, scallop shucking, data entry, and population dynamics.

Personal Log:

Sleepless on the Atlantic
Steaming forward to the station that is just right up ahead,
Six hours is up, and our shift will end, so it is time to go to bed.
Before I rest and take a nap, some chow I would like to eat,
It will be good to rest a little while and get off of my feet.
The food is great, so many choices that we are able to choose,
Just fill 'er up and head to bed and settle for a snooze.

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